

L8 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1995:947170 CAPLUS
 DN 124:31956
 ED Entered STN: 29 Nov 1995
 TI Antimicrobial fabrics containing chitosan and zinc oxide and their
 manufacture
 IN Ozawa, Toshio; Shiotani, Tsutomu
 PA Toyo Kogyo Co, Japan; Toyo Boseki
 SO Jpn. Kokai Tokkyo Koho, 4 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM D06M015-03
 ICS A01N059-16; D06M011-44
 CC 40-9 (Textiles and Fibers)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 07229063	A2	19950829	JP 1994-50974	19940209 <--
PRAI	JP 1994-50974		19940209		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 07229063	ICM	D06M015-03
	ICS	A01N059-16; D06M011-44
	IPCI	D06M0015-03 [ICM,6]; A01N0059-16 [ICS,6]; D06M0011-44 [ICS,6]

AB Antimicrobial natural, regenerated, or synthetic fabrics are manufactured by
 treatment of fabrics with (A) mixture of fine granular ZnO and deacetylated
 chitin organic acid salts or (B) or their complexes. The fabrics show good
 washfastness, moisturizing, and UV-shielding properties. Thus, cotton
 textile was treated with a solution containing chitosan acetate and ZnO to show
 good antimicrobial activity.

ST antimicrobial fabric chitosan zinc oxide; cotton antimicrobial textile
 chitosan zinc oxide

IT Polyester fibers, uses

RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (antimicrobial; antimicrobial, moisturizing, UV-shielding fabrics
 containing chitosan and zinc oxide)

IT Bactericides, Disinfectants, and Antiseptics
 Fungicides and Fungistats

(chitosan salts and zinc oxide; antimicrobial, moisturizing,
 UV-shielding fabrics containing chitosan and zinc oxide)

IT Textiles

(cotton, antimicrobial, moisturizing, UV-shielding fabrics containing
 chitosan and zinc oxide)

IT 1314-13-2, Zinc oxide, uses 87582-10-3, Chitosan acetate

RL: BAC (Biological activity or effector, except adverse); BSU (Biological
 study, unclassified); BUU (Biological use, unclassified); MOA (Modifier or
 additive use); BIOL (Biological study); USES (Uses)

(antimicrobial, moisturizing, UV-shielding fabrics containing chitosan and
 zinc oxide)

RN 1314-13-2

RN 87582-10-3

L8 ANSWER 2 OF 3 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN

AN 1995-332899 [43] WPIX

DNC C1995-147444

TI Antibacterial fibre with washing resistance, etc. - comprises natural,
 regenerated or synthetic fibre, and de-acetylated chitosan with zinc
 oxide..

DC A11 D22 E32 F06

PA (TOYO) TOYO KOGYO CO; (TOYM) TOYOBO KK

CYC 1

PI JP 07229063 A 19950829 (199543)* 4 D06M015-03 <--

ADT JP 07229063 A JP 1994-50974 19940209

PRAI JP 1994-50974 19940209

IC ICM D06M015-03

ICS A01N059-16; D06M011-44

AB JP 07229063 A UPAB: 19951102

An antibacterial fibre prod. comprises a natural, regenerated or synthesised fibre, and a mixture or a complex deacetylated chitin and zinc oxide. The antibacterial fibre prod. is prepared by applying a mixture or a complex of zinc oxide micro powder and an organic acid salt of deacetylated chitin to a fibre prod. made of a natural, regenerated or synthesised fibre.

ADVANTAGE - Good washing resistance, moisture retaining capacity and ultra violet-blocking activity as well as high antibacterial activity.

Dwg.0/0

FS CPI

FA AB; DCN

MC CPI: A08-M02; A10-E09; A12-G; A12-S05R; D09-A01; E35-C; F03-C02B

L8 ANSWER 3 OF 3 JAPIO (C) 2006 JPO on STN

AN 1995-229063 JAPIO

TI ANTIMICROBIAL FIBER PRODUCT AND ITS PRODUCTION

IN OZAWA TOSHIO; SHIOTANI TSUTOMU

PA TOYO KOGYO KK

TOYOBO CO LTD

PI JP 07229063 A 19950829 Heisei

AI JP 1994-50974 (JP06050974 Heisei) 19940209

PRAI JP 1994-50974 19940209

SO PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined Applications, Vol. 1995

IC ICM D06M015-03

ICS A01N059-16; D06M011-44

AB PURPOSE: To obtain the subject fiber product having safety to the human body, showing antimicrobial properties and moisture retention of excellent permanence by providing a fiber product composed of natural, regenerated or synthetic fiber with a mixture comprising chitosan and zinc oxide.

CONSTITUTION: A fiber product composed of natural, regenerated or synthetic fiber is impregnated preferably separately with a deacetylated chitin (chitosan) and finely granulated ($\leq 1.0\mu\text{m}$) zinc oxide and a complex of both the components is formed on the fiber product to give an antimicrobial fiber product showing excellent antimicrobial properties, moisture retention and ultraviolet light screening properties without damaging the human body and organisms. The content of the complex (mixture) is 0.02-15wt.% based on the fiber. The degree of deacetylation of the deacetylated chitin is preferably $\geq 50\%$.

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